

RESUME

Dr. Azhar Equbal

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OBJECTIVE:

To procure job in a fast growing organization that would allow me to develop my skills and have growth in my professional skills while contributing to organizational goals.

RESEARCH INTERESTS:

Additive Manufacturing Technologies and its Applications

Non-Conventional Manufacturing

Metallization

Statistical Process Control

Artificial Intelligence

Process Optimization

TEACHING INTERESTS:

Additive Manufacturing Technologies

Thermodynamics

Fluid Mechanics and Machinery

Manufacturing Technology

Automobile Engineering

EDUCATION & HONOURS:

Ph.D in Manufacturing Engineering, May 2018

National Institute of Foundry and Forge Technology, Hatia, Ranchi under Faculty of Engineering, Ranchi University, Ranchi, India.

Dissertation Title: An Investigation on the Feasibility of FDM process in EDM electrode Manufacturing.

M. Tech in Manufacturing Engineering, July 2011

National Institute of Foundry and Forge Technology, Hatia, Ranchi under Ranchi University, Ranchi, Jharkhand, India.

Thesis Title: Study of Forging Behavior of Titanium Alloys- a Soft Computing Approach

Overall CGPA: 8.03/10

B.Tech in Mechanical Engineering (IV Year Degree Course), May 2008 (**with Honours**)

Dr. MGR Educational and Research Institute, Chennai (A Deemed University)

Thesis Title: "Conditional Based Maintenance of C.I Engines" in Central coalfields Limited (CCL), Rajrappa, Ramgarh, Ranchi.

Overall CGPA: 9.12/10

Diploma in Automobile Engineering, 2005

University Polytechnic, BIT Mesra, Ranchi, India.

Thesis Title: Study of Differential and Transmission System in an Automobile

Overall Percentage: 94.3%

RESEARCH EXPERIENCE:

Research Scholar, National Institute of Foundry and Forge Technology, Hatia, Ranchi, **August 2012- July 2017.**

- The work can be seen as the first attempt to investigate the feasibility of Fused Deposition Modelling (FDM) process for developing suitable electrode for electrical discharge machining process.
- The knowledge generated in the research explains the complex build mechanism of FDM processed parts.
- Research provides the insight on the variation of quality measures with respect to change in process parameters.
- Relationship between input parameters and output response is provided which will help the practitioners to predict the FDM part quality on their selected parameters.
- Methodology of obtaining optimum process parameters settings to improve overall FDM part quality is presented.
- Research provides the comparative study between the commonly used methods for metallization of ABS parts and also suggests the method suitable for EDM electrode fabrication.
- Relationship between metalized thickness and time of deposition is established.
- Research establishes the suitability of electrolysis followed by electroplating as simple and cost effective method for generating electrodes for EDM application.
- Comparison between the fabricated metalized FDM electrode and conventional solid copper electrode is established in terms of Material removal rate, Tool wear rate, surface quality and dimensional accuracy.

TEACHING EXPERIENCE

- Currently associated in contract with **Jamia Millia Islamia, New Delhi – 110025, A Central University** as an Assistant Professor in the Department of Mechanical Engineering, Since 09th August 2019.
- RTC Institute of Technology, Ormanjhi, Ranchi, India, (AICTE approved) as an Assistant Professor in Mechanical Engineering Department (14th September 2017 – 08th August 2019).
- Guru Gobind Singh Educational Society's Technical Campus, Bokaro, Jharkhand (AICTE approved), as an Assistant Professor in Mechanical Engineering Department (25th August 2017 – 10 September 2019).
- 1 Year and 1 Month (1st July 2011 - 31st July 2012) Industrial experience in TATA Tayo Rolls Limited (**A Subsidiary of TATA Steel**), Gamharia, Jamshedpur, Jharkhand, India.
- Guest lectures in ICFAI University, Ranchi, Jharkhand.

TRAINING AND EXCURSIONS:

Heavy Engineering Corporation LTD (HEC), Ranchi

- ✓ One Month Vocational Training in FFP and HMBP Plant during M. Tech in Engineering.
- ✓ One Month Vocational Training in HMBP Plant during B.Tech in Engineering.

Central Coalfields Limited (CCL), Rajrappa

- ✓ One month project work at Rajrappa, Ranchi during B.Tech in Engineering.

Tata Motors

- ✓ One Month Industrial Training on minimization of monthly scrap of GBS-40 & GBS-60 in Gear Box Division.

LANGUAGES:

English, Hindi and Urdu, and Arabic.

SOFTWARE SKILLS:

Operating Systems: Windows XP, windows 7, Vista.

Scientific Applications: MINITAB, Basics of DEFORM, and MATLAB.

Technical Drawing: Basics of CATIA.

Office Applications: Microsoft PowerPoint, Access, Excel, Word.

AWARDS AND HONORS:

- Research Assistantship, National Institute of Foundry and Forge Technology, Ranchi, India, 2012-2017.
- Certificate of Excellence, in Four week Faculty Development Programs (FDPs) conducted by Indian Institute of technology, Bombay (IIT BOMBAYX) April-May 2018 at BIT Mesra, Ranchi, Jharkhand, India.
- Best Paper Award: International Conference on Advances in Engineering & Technology (ICAET), Chennai, India-2011.
- Second topper of batch in Master of technology in Manufacturing Engineering.
- Fourth topper of batch in Bachelor of technology in Mechanical engineering.
- Topper of the batch in Diploma in automobile Engineering.
- Receiver of merit cum certificate in GSD Science Academy, Vizag A.P, scored 3rd position.
- Certificates in Math Olympiad

CHAPTER IN BOOKS:

- **Azhar Equbal**, Md. Israr Equbal, Md. Asif Equbal and Anoop Kumar Sood (2019), *Multi-Criterion Decision Method for Roughness Optimization of Fused Deposition Modelled Parts, Additive Manufacturing Technologies from an Optimization Perspective*, IGI Global, International Publisher of Information Science and Technology Research (DOI: 10.4018/978-1-5225-9167-2.ch012, ISBN10: 1522591672, EISBN13: 9781522591696, pp. 235-262).
- **Azhar Equbal**, Md. Israr Equbal, Md. Asif Equbal and Anoop Kumar Sood (2019), *An Insight on Current and Imminent Research Issues in EDM, Non-Conventional Machining in Modern Manufacturing Systems*, IGI Global, International Publisher of Information Science and Technology Research (DOI: 10.4018/978-1-5225-6161-3, ISBN10: 1522561617, EISBN13: 9781522561620, pp. 33-54).
- **Azhar Equbal**, Md. Asif Equbal & Md. Israr Equbal (2017), *Optimization Techniques in Electric Discharge Machining Process*, Chapter 14 in Industrial Engineering and management practices (International Edition), pp. 269-280, International Research Publication House, Delhi, India, ISBN 978-93-84443-56-6.

PUBLISHED PAPERS IN REFEREED JOURNALS**SCI Indexed and Scopus Journals**

- **Azhar Equbal** and A. K. Sood, “An Investigation on the Feasibility of Fused Deposition Modelling process in EDM Electrode Manufacturing, CIRP Journal of Manufacturing Science and Technology” Elsevier Publication, (**SCI Indexed**).

- **Azhar Equbal** and Anoop Kumar Sood, “Investigation on metallization in FDM build ABS part using electroless deposition method”, Journal of manufacturing process, Elsevier publication, Vol. 19, pp. 22-31, 2015 (**SCI Indexed**).
- **Azhar Equbal** and Anoop kumar Sood, “Metallization on FDM Parts Using the Chemical Deposition Technique”, Coatings, a MDPI journal, Vol. 4, pp. 574-576, 2014 (**SCI Indexed**).
- **Azhar Equbal**, Md. A. Equbal, A. K. Sood, R. Pranav and Md. I. Equbal, “A Review and Reflection on Part quality Improvement of Fused Deposition modelled parts”, IOP Conf. Series: Material science and Engineering, Vol. 455, pp. 1-9, 2018 (**Scopus Indexed**).
- Md. Israr Equbal, **Azhar Equbal**, Debasis Mukerjee, “A Full Factorial Design Based Desirability Function Approach for Optimization of Hot Forging of Vanadium Micro-Alloyed Steel” Metallography, Microstructure, and Analysis, Springer Publication Doi.org/10.1007/s1363, Volume 7(5), pp. 504-523 (**Scopus Indexed**).
- Md. Israr Equbal, Md. Asif Equbal, **Azhar Equbal** “Optimization of Hot Forging Parameters Using Taguchi Method and Grey Relational Analysis for AISI 1035 Steel” International Journal of Microstructure and Materials Properties, Inderscience Publication, Vol. 13, pp. 198-212, 2018. (**Scopus Indexed**).
- **Azhar Equbal** and Anoop Kumar Sood, Problems and Challenges in EDM Electrode Fabrication using RP: A Critical Review, World Applied Sciences Journal, IDOSI Publications, Vol. 28 (8), pp. 1127-1133, 2013 (**Scopus Indexed**).
- Md. Israr Equbal, Rajkumar Ohdar, **Azhar Equbal** and Anoop Kumar Sood, Grey based Taguchi method for optimization of hot forging of connecting rod, International Journal of Manufacturing Research, Inderscience publication, Vol. 11(1), pp. 89-109, 2016 (**Scopus Indexed**).
- **Azhar Equbal**, Md. Israr Equbal, Anoop Kumar Sood, Md Asif Equbal, A Comparative Study on Electroplating of FDM Parts, International Journal of technology, Vol. 8 (5), pp. 930- 938, 2017 (**Scopus Indexed**).
- **Azhar Equbal**, Anoop Kumar Sood, Abdul Razzaq Ansari and Md. Asif Equbal, Optimization of process parameters of FDM part for minimizing its dimensional inaccuracy, International Journal of Mechanical and Production Engineering Research and Development, Vol. 7(2), pp. 57-66, 2017 (**Scopus Indexed**).

Refereed International Journals

- **Azhar Equbal**, Md. Israr Equbal and Anoop Kumar Sood, “PCA- based Desirability Method for Dimensional Improvement of Part Extruded by Fused Deposition Modelling Technology”, Progress in Additive Manufacturing, Springer Publication, Journal No. 40964, Vol. 4 (3), pp. 269-280, DOI: 10.1007/s40964-018-00072-4
- Md. Israr Equbal, **Azhar Equbal**, Md. Asif Equbal and R. K. Ohdar, “Effect of Temperature and Strain rate of the Hot Deformation of V Microalloyed Steel on Flow Stress”, International journal of Materials Forming and Machining Processes (IJMFMP), Vol. 6 (1), 2019, DOI: 10.4018/IJMFMP.2019010103.
- **Azhar Equbal**, Anoop Kumar Sood, Md. Asif Equbal and Md. Israr Equbal, An Investigation on material removal rate of EDM process: A Response surface methodology approach, International Journal of Mechanical, Aerospace, Industrial, Mechatronic and Manufacturing Engineering, Vol. 11(4), pp. 845-850, 2017.
- **Azhar Equbal**, Nitesh Dixit and Anoop Kumar Sood, Electroless metallisation of ABS plastic: a comparative study, International journal of Rapid Manufacturing, Inderscience publications, Vol. 5(3/4), pp. 255-275, 2015.

- **Azhar Equbal** and Anoop Kumar Sood, Rapid Tooling: A major shift in tooling practice, Journal of manufacturing and industrial engineering, Vol. 14 (3-4), pp. 1-9, 2015.
- **Azhar Equbal**, Israr Equbal and Rajkumar Ohdar, Isothermal Forging of Ti-6Al-4V Alloy - Flow Stress Evaluation and Optimization, International Journal of Scientific Research in Science, Engineering and Technology, Vol. 1(5), pp. 235-238, 2015.
- **Azhar Equbal** and Anoop Kumar Sood, Electrical discharge machining: An Overview on various areas of research, Journal of manufacturing and industrial engineering, Vol. 13(1-2), pp. 1-6, 2014.
- **Azhar Equbal**, Asif Equbal and Anoop Kumar Sood, Metallization on FDM processed parts using electroless procedure, Procedia of Material science, Elsevier publication, Vol. 6, pp. 1197-1206, 2014.
- **Equbal A.**, Shamim M., Sood A. K., Metallic finishing of RP parts, Technology Letters, Vol. 1, pp. 11-15, 2014.
- **Azhar Equbal** and Anoop Kumar Sood, Electroless plating of copper on different shaped ABS parts: A comparison, Advanced Materials Manufacturing & Characterization, Vol. 4(1), pp. 32-41, 2014.
- **Azhar Equbal**, Nitesh Dixit and Anoop Kumar Sood, Electroless Plating on plastic, International journal of scientific and engineering Research, Vol. 4(8), 2013.
- **Azhar Equbal**, Nitesh Dixit and Anoop Kumar Sood, "Rapid prototyping Application in manufacturing of EDM Electrode", International journal of scientific and engineering Research, Vol. 4(8), 2013.
- **Azhar Equbal**, Sankar Behera, Israr Equbal, Rajkumar Ohdar and Sharda Nand Sinha, Prediction of Flow Stress of Ti-6Al-4V Alloy Forging: An Artificial Neural Network and Neuro-fuzzy Based Approach, International journal of Science and technology, Vol. 1(2), pp. 57-64, 2011.
- Rajkumar Ohdar, Sankar Behera, Israr Equbal and **Azhar Equbal**, Process Parameters Optimization for Isothermal Forging of Ti-6Al-4V Alloy using Taguchi Method and Artificial Neural Network, CIIT International Journal of Automation and Autonomous System, Vol. 3(11), pp. 521-525, 2011.

PRESENTATIONS/PAPERS IN THE CONFERENCE PROCEEDINGS

- **Azhar Equbal**, Md. A. Equbal, A. K. Sood, R. Pranav, Md. I. Equbal, 2nd International Conference on Advancements in Aeromechanical Materials for Manufacturing (ICAAMM 2018), 13th-14th July 2018, MLR Institute of Technology, Hyderabad.
- **Azhar Equbal**, Anoop Kumar Sood, Md. Israr Equbal, Pranav Ravindrannair, Thick film copper deposition on FDM processed ABS parts by using Aluminum Charcoal deposition process, National Conference on Advances in Mechanical Engineering and Nanotechnology (NCAMENT2018), 29-30 June, 2018, MED, University College of Engineering, Osmania University, Hyderabad.
- Md. Asif Equbal, **Azhar Equbal**, Archana Kumari, Rajkumar Ohdar, A comprehensive model for supply chain performance measurement: Application in the coal beneficiation plant of steel manufacturing company, Industrial Engineering and Engineering Management (IEEM), IEEE International Conference, 10th – 13th December, 2017, Singapore, IEEE TEMS Hong Kong Chapter.
- **Azhar Equbal**, Md. Asif Equbal, Parwez Alam and Md. Israr Equbal, An Investigation on material removal rate of EDM process: A Response surface methodology approach, Second international conference on mechanical and manufacturing engineering, 6th - 7th April, 2017, Enathur, Kanchipuram, India.

- **Azhar Equbal** and Anoop kumar Sood, Parametric optimization of dimensional accuracy of FDM processed ABS part, International Conference on Advances in Materials and Manufacturing, 19th - 21st Jan 2017, NIFFT, Hatia, Ranchi, India.
- Md. Shamim, Anoop Kumar Sood, **Azhar Equbal** and P.V Sivaprasad, Optimization of machining parameters on turning of GFRP composites by a hybrid algorithm using artificial neural network and genetic algorithm, International Conference on Advances in Materials and Manufacturing, 19th - 21st Jan 2017, NIFFT, Hatia, Ranchi, India.
- **Azhar Equbal**, Asif Equbal and Anoop Kumar Sood, Analysis of material removal rate of electric discharge machining (EDM) using response surface methodology, National seminar on Convergence of science and technology (NSCST), 19th - 20th Feb, 2016, C.I.T, Tatisilwai, Ranchi, India.
- **Azhar Equbal**, Asif Equbal, Md. Shamim and Anoop Kumar Sood, Electroplating of FDM parts: A comparison via two different routes, International Conference on Materials Science and Technology, 1st - 4th March, 2016, University of Delhi, Delhi, India.
- **Azhar Equbal**, Asif Equbal and Anoop Kumar Sood, Metallization on FDM processed parts using electroless procedure, International conference on material processing and characterization, 9th - 10th March, 2014, GRIET, Hyderabad, India.
- **Azhar Equbal**, Md. Shamim and A. K. Sood, Electroless plating of copper on different shaped ABS parts: A comparison, 3rd International Conference on Advances in Tribology (ICAT), 21st - 24th February, 2014, NIT Calicut, Kerala, India.
- **Azhar Equbal**, Nitesh Dixit and Anoop Kumar Sood, Electroless Plating on plastic, 3rd International conference on global innovations in technology and science, 4th - 6th April, 2013, Kottayam, Kerala, India.
- **Azhar Equbal**, Nitesh Dixit and Anoop Kumar Sood, Rapid prototyping Application in manufacturing of EDM Electrode, 3rd International conference on global innovations in technology and science, 4th - 6th April, 2013, Kottayam, Kerala, India.
- Rajkumar Ohdar, Israr Equbal, **Azhar Equbal** and Sankar Behera, Process Parameter optimization for Isothermal Forging of Ti-6Al-4V alloy: A Soft Computing Approach, International Conference on Advances in Engineering & Technology (ICAET'11), 27th -28th May, 2011, Nagapattinam, Chennai, India.
- S. Behera, R. K. Ohdar, **Azhar Equbal**, M. K. Banerjee and Vinod Kumar, An adaptive artificial neural network approach to the optimization of flow stress evaluation for isothermal forging of conventional Ti-6Al-4V alloy, ATCOM 2011 5th - 7th July, 2011 RDCIS SAIL, Ranchi, India.

WORKSHOPS/ SHORT-TERM COURSES ATTENDED:

- Technical Seminar and Workshop on High Precision Arc Welding Technology in India, sponsored by CII-AOTS and The Japan Welding Engineering Society, Jamshedpur, India, 13th-14th December 2018.
- Four weeks Faculty development Program (**FDP 201x and FDP 202x**) Organized by IIT BombayX at BIT Mesra, Ranchi, Jharkhand in April-May 2018.
- Technical Event on Robo-race and JCB Model in the Department of Mechanical Engineering at RTC Institute of Technology, Ranchi, Jharkhand, 19-22 Sept. 2017.
- National Workshop on “Advances in Manufacturing Engineering” held at NIFFT, Ranchi, India, 17th-18th March 2017.
- Workshop on “Recent Trends in Welding Processes” sponsored by the Royal Academy of Engineering, United Kingdom held at NIFFT, Ranchi, India, 26th July 2016.

HIGHLIGHTS OF QUALIFICATIONS:

- Expertise in Process modelling and Process optimization.
- Familiar with Finite Element Method and Analysis software (DEFORM).
- Strong background in Minitab, MATLAB, Word and Excel.
- Expertise in Additive Manufacturing, Non – conventional Manufacturing specially EDM, metal machining and welding process.
- Guided many B.Tech final year projects.
- Familiar with machines and its working principles for different machines such as Instron, Fused Deposition modelling Machine and Hommel Werke Turbo Wave V7.20 roughness tester.
- Excellent public speaking and communication skills, self-motivated team player.

PERSONAL SNIPPET

Permanent Address : Hill View Nursing Home Road, Bariatu
Basti, District- Ranchi, Jharkhand, India,
PIN- 834009

Date of Birth : 20 June 1986.

Language's known : English, Hindi and Urdu

Marital Status : Married

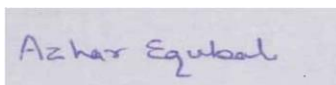
Location Preference : Anywhere

Reference

1. Dr. Anoop Kumar Sood
Associate Professor, Department of Manufacturing Engineering,
National Institute of Foundry and Forge Technology, Hatia,
Ranchi, Jharkhand – 834003, India
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2. Dr. Mohamed Shafiullah Hussain V
Assistant Professor, Department of Manufacturing Engineering,
National Institute of Foundry and Forge Technology, Hatia,
Ranchi, Jharkhand – 834003, India
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3. Md. Zahid Ahmad
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DECLARATION

I hereby declare that the above information given by me is true to the best of my knowledge.



Azhar Equbal

Place: Ranchi, Jharkhand

Date: 10-09-2019